

Factorisation

Workout

Question 1

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|------------------------|-------------------|--------------------|-----------------|
| (a) $2(2x + 3)$ | (b) $5(3x + 4)$ | (c) $3(3y - 4)$ | (d) $5(x + 3)$ |
| (e) $3(2x - 1)$ | (f) $4(x + 2)$ | (g) $5(y - 5)$ | (h) $8(w + 3)$ |
| (i) $5(2y + 3)$ | (j) $7(2w + 3)$ | (k) $10(2y - 3)$ | (l) $9(3x + 2)$ |
| (m) $2(3 - 2x)$ | (n) $3(3 + 4y)$ | (o) $15(3 + 4x)$ | (p) $16(y - 2)$ |
| (q) $11(2a + 5)$ | (r) $20(5 - 2y)$ | (s) $3(2x + 3y)$ | (t) $2(2w - a)$ |
| (u) $5(5y - 7z)$ | (v) $4(2x^2 + 5)$ | (w) $15(2y^3 - 1)$ | |
| (x) $14(3y + 2x - 4c)$ | | | |

Question 2

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|------------------|------------------|-------------------|-------------------|
| (a) $x(x + 7)$ | (b) $x(x - 3)$ | (c) $y(y + 1)$ | (d) $w(w + 9)$ |
| (e) $x(x - 7)$ | (f) $2w(2w + 5)$ | (g) $2x(3x - 4)$ | (h) $3y(3y - 2)$ |
| (i) $c(10 + c)$ | (j) $g(5 - g)$ | (k) $7x(2x + 5)$ | (l) $10x(4x - 5)$ |
| (m) $6x(2x + 3)$ | (n) $6x(4x - 3)$ | (o) $15y(3y + 4)$ | (p) $w(7w + 2)$ |

Question 3

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|--------------------|---------------------|-------------------|-----------------------|
| (a) $x(x + y)$ | (b) $a(a - b)$ | (c) $x(y + z)$ | (d) $a(b + c - d)$ |
| (e) $2c(3c - 2d)$ | (f) $5x(2x + 3y)$ | (g) $6b(2a + 3c)$ | (h) $4y(2x + y)$ |
| (i) $e(7d - 9c)$ | (j) $4a(6b^2 + 7c)$ | (k) $5xy(6 + 7z)$ | (l) $2a(2bc - 3)$ |
| (m) $2cd(4f + 5e)$ | (n) $w(7w + 6 + y)$ | (o) $2ab(4b - 5)$ | (p) $2xy(2y + 3 + x)$ |
| (q) $mn(6 - 7m)$ | (r) $11h(g^2 + 2h)$ | | |

Question 4

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|--------------------|--------------------|---------------------|---------------------|
| (a) $x^2(x + 2)$ | (b) $x^2(5x - 1)$ | (c) $4c(2c^2 + 3)$ | (d) $5w^2(2 - 3w)$ |
| (e) $8y^2(4y + 3)$ | (f) $3x(4x^3 + 5)$ | (g) $4a^2(a^3 - 3)$ | (h) $w^7(8w^2 + 1)$ |

Apply

Question 1

There is no common factor available.

Question 2

$$14y - 6$$

Question 3

Neither Rebecca nor Victoria have factorised fully. The answer should be $15(y + 2)$

Question 4

Use of a plus sign in the factorised answer, it should be a minus sign.

Question 5

It has not been fully factorised. The answer should be $4x(6x + 5)$

Question 6

It should be $5ac(4a + 6)$ opposed to the $4a^2$ used in the brackets.